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Corso di dottorato in	**Doktoratsstudium in**
MOUNTAIN ENVIRONMENT AND AGRICULTURE	**MOUNTAIN ENVIRONMENT AND AGRICULTURE**

Pagina web del corso:
https://www.unibz.it/de/faculties/agricultural-environmental-food-sciences/phd-mountain-environment-agriculture/

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Articolo 1 – POSIZIONI

1. Per il corso di dottorato in Mountain Environment and Agriculture sono bandite **complessivamente 9 posizioni;** il corso è articolato nei seguenti curricula: Curriculum 1 **Sustainable Agricultural Production Systems** e Curriculum 2 **Ecology, Environment and Protection of Mountain Areas**

2. Tutte le informazioni relative al corso di dottorato in generale, al programma e alla sua articolazione nonché ai possibili progetti di ricerca elencati di seguito, possono essere reperite al seguente link: https://www.unibz.it/de/faculties/agricultural-environmental-food-sciences/phd-mountain-environment-agriculture/

Artikel 1 – STUDIENPLÄTZE

1. Für das Doktoratsstudium in Mountain Environment and Agriculture sind **insgesamt 9 Studienplätze** ausgeschrieben; das Doktoratsstudium in folgende Curricula aufgeteilt: Curriculum 1 **Sustainable Agricultural Production Systems** und Curriculum 2 **Ecology, Environment and Protection of Mountain Areas**

2. Sämtliche Informationen über das Doktoratsstudium, das Programm und seine Struktur sowie die unten angeführten möglichen Forschungsprojekte sind unter folgendem Link abrufbar: https://www.unibz.it/de/faculties/agricultural-environmental-food-sciences/phd-mountain-environment-agriculture/

3. Posti con borsa unibz: 3

di cui per Curriculum 1:2

per Curriculum 2: 1

Posti senza borsa di dottorato: 0

Posti con borsa a tematica vincolata: 6

3. Positionen mit unibz-Stipendium: 3

davon für Curriculum 1: 2

für Curriculum 2: 1

Positionen ohne Stipendium: 0

An themenspezifische Stipendien gebundene Positionen: 6

4. La seguente lista di progetti di ricerca e relativi supervisore e supervisori collegati alle posizioni finanziate con borsa unibz o senza borsa è elencata a scopo meramente esemplificativo, potendo essere oggetto di studio altri argomenti inerenti alle attività dei diversi gruppi di ricerca presenti nell'Ateneo.

4. Die folgende Liste der Forschungsprojekte und der entsprechenden Betreuerinnen und Betreuer in Bezug auf mit unibz-Stipendien finanzierte Positionen oder Positionen ohne Stipendium dient nur zur Veranschaulichung, da auch andere Themen im Zusammenhang mit den Aktivitäten der verschiedenen Forschungsgruppen der Universität Studiengegenstand sein können.

Research projects and supervisors		
Curriculum 1 Sustainable agricultural production systems		
Title	**Supervisor(s)**	**Notes**
1. Plant-microorganism interactions and soil biodiversity **Description.** The interaction among plants, microorganisms, and soil fauna is crucial in regulating soil fertility and enhancing ecosystem resilience. This PhD project aims to investigate the influence of root exudates on microbial diversity and soil fauna, focusing on biogeochemical processes and rhizosphere dynamics. The candidate is expected to work with methodologies based on soil chemistry, environmental DNA (eDNA), and metagenomics to investigate the effect of soil composition on microbial diversity and soil fauna. The outcomes will provide novel insights to promote sustainable soil management and, more broadly, soil health. **Required knowledge:** The ideal candidate should have a solid background in soil chemistry, experience in molecular soil (agro)-ecology, and wet lab techniques. Proficiency in data analysis R environment and fieldwork experience are highly desirable.	Prof. T. Mimmo and Prof. L. Borruso	
2. Stomatal optimality in the face of climate extremes **Description**. In order to allow for the diffusion of carbon dioxide into leaves, and thus photosynthesis, vascular plants have to open their stomata, which inevitably leads to the loss	Prof. G. Wohlfahrt, Dr. A. Asensio, Prof. M. Tagliavini	

of water vapor through transpiration. The photosynthetic uptake of carbon dioxide is regarded a benefit for plants, as the assimilated carbon allows for maintaining existing and growing new biomass and investing in defense and reproduction, while transpiration, conversely, is regarded a cost. It has thus been suggested that plants should adjust stomatal conductance in order to maximize the benefit of carbon sequestration, while at the same time minimizing the associated costs of transpiration and indeed, such optimal behavior has been observed experimentally and is used as a basis for modeling plant photosynthesis and transpiration. What is unknown though, is whether plants also behave optimally when exposed to extreme climatic events, such as heatwaves or droughts. The goal of this PhD project is to investigate whether different grapevine varieties behave optimally during extreme climatic events. To that end the PhD student will conduct leaf gas exchange measurements and analyze existing prior data both from lab experiments under controlled conditions as well as field manipulations using a variety of stomatal optimality models based on different theoretical assumptions. The PhD student is expected to have a strong background in plant ecophysiology, an interest in mathematical simulation models and skills in programming and analyzing complex datasets.		
3. Assessing and certifying the safety conditions of agricultural and forestry machinery in mountainous environments **Description**. In mountainous areas, fatal tractor rollover accidents are still among the most significant risks for the agricultural and forestry sectors. Just in South Tyrol, there is an average of one fatal accident per month, and more or less serious accidents in the sector are now higher than on construction sites. In the laboratory of Agro-Forestry Innovations of unibz, located at the Bolzano Technology Park, a tilting and rotating platform with four independents, shifting platforms has been realized, capable of reproducing various conditions for extreme mountain environments and mapping the stability performance of agricultural machinery according to the environmental working conditions. The platform, unique in its kind, combines the measurement of actual rollover performance conditions with their estimation through modelling approaches, thus creating a sort of 'digital twin' that can be used for both design and certification purposes for agricultural machinery. The aim of the project is to generate 'stability maps' in the laboratory for different types of tractors (normally in use in the Alpine region) and make them available to agricultural operators driving the vehicles, so that - by means of special displays and sensors- the stability conditions can be highlighted in real time, alerting them in advance of possible increases in risk	Prof. F. Mazzetto, Dr. G. Carabin	

margins. In addition, since the maps are essentially based on geometric parameters (direction of advancement, inclination of the ground), for each type of tractor it will also be possible to digitally map (on GIS supports) the risk levels of the different farm areas of an agricultural or forestry company, preparing thematic maps useful for managing safety conditions according to new Smart Agriculture and Smart Forestry approaches. **Required knowledge**: We are looking for a highly motivated and collaborative PhD candidate with a background in agricultural and/or forestry sciences, rather than in technical domains such as mechanical, electronic or information engineering, but with a genuine and strong interest in developing a professional profile in the field of agricultural (or forestry) engineering. Candidates should have strong oral and written communication skills and a keen interest in the application of Information Technologies in the production processes carried out in the agricultural or forestry sector. Candidates should also have the ability to work in a interdisciplinary team. Past experiences with GIS platforms and programming, as well as competences in statistical data analysis and fieldwork practices, are preferential.		
4. Developing and assessing alternative niche-crop based mountain farming systems mediating between economic and environmental sustainabilty needs **Description.** Agricultural production systems in mountainous contexts have historically been characterised as activities in marginal areas, in which the economic viability of the enterprises they represent is only guaranteed by external subsidies of various kinds, the provision of which is usually motivated by political, social and economic objectives to contrast the progressive depopulation of mountains. However, support policies at the international level are destined to contract. It is therefore necessary to identify new models of agricultural development capable of responding resiliently to these trends, also by considering the adoption of new cultivation systems - often based on crops hitherto considered 'niche' - as well as facilitating the adoption of farm processing systems capable of guaranteeing greater added value than simple primary production. It is from these approaches that production chains have emerged in recent times as alternatives to those commonly adopted in alpine pastures based on the FORAGES-MILK- CHEESE transformation, and for example consisting of the sequence CEREAL-FLOUR-BREAD rather than CEREAL-MALT-BEER. In addition to these, there is also a growing interest in PISTACHO cultivation, with the associated production of high value-added dried seeds. Regardless of the solution, all these	Prof. F. Mazzetto, Dr. G. Carabin	

sectors have one common problem: the difficulty of managing field and post-harvest mechanisation chains in a mountainous context featured by its related environmental, economic and social issues. In particular, for certain operations (e.g. cereal harvesting on sloping terrain), the difficulties take on such constraining aspects as to make consideration of the cereal chain practically unfeasible. The aim of the project concerns: 1) a critical analysis of mechanisation problems for alternative supply chains to animal production, with particular attention also to the logistics of the production and distribution chain; 2) the performance of field tests on machine prototypes previously made to overcome mechanisation problems; 3) the execution of comparative and integrated analyses of supply chains, through methods that include both environmental assessment through LCA and multi-criteria analysis (AMC). In carrying out this work, we will have the opportunity to interact both with the farmers of the companies involved, and with the local institutional actors interested in assessing all the possible impacts on the territory. **Required knowledge**: We are looking for a highly motivated and collaborative PhD candidate with a background in agricultural sciences, rather than in technical domains such as mechanical, electronic or information engineering, but with a genuine and strong interest in developing a professional profile in the field of agricultural engineering. Candidates should have strong oral and written communication skills and a keen interest in the introduction of technological innovation (including digitalisation and Information Technologies) in the production processes of the mountain agricultural sector. Candidates should also have the ability to work in a interdisciplinary team. Past experiences with CAD and GIS platforms, as well as competences in statistical data analysis and fieldwork practices, are preferential.		
5. Identifying and editing genes for drought resistant apple trees. **Description**. Apple and grapevine are the main crops grown below 1500 m a.s.l. in South Tyrol. Domesticated apple varieties are grown on dwarfing rootstocks that are highly sensitive towards low water availability. Future climate scenarios with more intense and prolonged drought periods, necessitate improving drought resistance in apple trees to ensure apple production and improve water use efficiency. However, drought tolerance is a complex trait, relying in part on root system architecture adaptations, whose genetic mechanisms are largely unknown in apples. This project aims to apply a translational approach, in order to identify candidate genes with a role in root system architecture adaptations towards water stress in apple. Our goal is to	Dr. S. J. Unterholzner, Dr. T. Letschka, Prof. T. Mimmo	Project co-funded by the Research Centre Laimburg

obtain molecular details of water stress adaptation in apple, and to develop drought resistant rootstock for apple cultivation through genome editing. **Key words:** Drought resistance, root system architecture, genome editing **Required knowledge**: We are looking for a highly motivated and collaborative PhD candidate with a background in agricultural science, biology or molecular biology. Candidates should have strong oral and written communication skills and a keen interest in molecular biology with an advanced understanding for plant development and physiology. They should have the ability to work in a interdisciplinary team. Experience with molecular cloning, imaging and bioinformatic approaches are preferential.		
6. Host-parasitoid Interaction: Molecular characterization and biological role of non-hatched parasitic wasps in stink bug egg masses **Description**. The research project is part of the long-term monitoring of the effects of the release of the parasitoid *Trissolcus japonicus* on the Asian Stinkbug (*Halyomorpha halys*) and native stink bug species in South Tyrol. The main objective is to evaluate the parasitisation efficacy of *T. japonicus*, evaluating both its impact on the target population and potential effects on non-target species through host-parasitoid interactions. The invasion of *H. halys* has caused severe damage to Italian crops since 2004, with its presence documented in South Tyrol since 2019. Traditional control methods (physical barriers, insecticides and pheromone traps) have proved insufficient, leading to the start of a national release programme of *T. japonicus* in 2020. Field monitoring of stink bug eggs revealed the presence of closed eggs, raising questions about the presence of parasitoids unable to complete their development. Although, these parasitoids may still contribute to biological control, their identification is important for accurately assessing the effectiveness of the programme and specificity of the biological control agent. This project aims to explore molecular methods for the identification of parasitoid species within closed eggs. Furthermore, the analysis of interactions between hosts and parasitoids, both autochthonous and allochthonous, will contribute to the understanding of the ecological dynamics and impact of exotic insect introduction. In the long term, the results may be applied to agroecosystem management, supporting the monitoring of *T. japonicus* and other parasitoids, to optimise biological control strategies. **Keywords**: *Trissolcus japonicus*, *Halyomorpha halys*, Biological control, Host-parasitoid interactions, Molecular ecology	Prof. H. Schuler	Project co-funded by the Research Centre Laimburg

Required knowledge: We are looking for an enthusiastic candidate with a background in agricultural or biological sciences, bioinformatics, ecology and evolution. Competences with molecular genetic methods as well as experience with ecological studies and field work are desired. The candidate should have excellent communication skills and should be fluent in English.		
7. Monitoring carbon fluxes and drought impacts on alpine biomes by high-resolution time-series of vegetation biophysical variables from multi-sensor Earth Observation data. **Description.** The PhD aims to improve the estimation of biophysical variables of alpine vegetation from Earth Observation (EO) data and will contribute to quantifying the interdependent effects of climate change on vegetation productivity and health. The first objective of the PhD is to generate and validate a time-series of biophysical variables (biovars, including mainly leaf area index and fraction of absorbed photosynthetically active radiation) as a proxy for vegetation productivity and health using EO. Spatially and temporally consistent, cloud-free time-series of biovars are necessary for long-term evaluations at the regional scale and will be obtained by exploiting synergies between various sensors onboard EO satellites. In particular, the PhD will use optical sensors with different spatial and temporal resolutions, and SAR sensors which are not affected by atmospheric conditions. To fuse multi-sensor data, tailored machine learning-based techniques will be developed, also addressing the challenges deriving from the highly heterogeneous land cover and complex terrain of the Alps. The second objective is to exploit the newly developed biovars timeseries for two concrete case studies, in synergy with running projects of the Institute for Earth Observation: 1) estimating the terrestrial carbon sinks in South Tyrol to guide policymakers in decisions about greenhouse gas emissions to limit global warming, and 2) quantifying changes in vegetation productivity and consequent yield losses to inform risk management instruments and mitigate the consequences of droughts for farmers, with a focus on mountain grasslands. The PhD will work in close collaboration with the Biosphere and Hydrosphere research group of the Institute for Earth Observation of Eurac Research (M. Castelli, C. Notarnicola), which focuses on monitoring and modeling spatial-temporal dynamics of the terrestrial water cycle, vegetation conditions, and land cover in mountainous regions, leveraging Earth Observation (EO) data in physical and data driven models. The PhD will benefit from the ongoing collaboration between Eurac Research and the research groups of Prof. Tagliavini and Prof. Zanotelli at the University	Dr. M. Castelli, Dr. C. Notarnicola, Prof. D. Zanotelli, Prof. M. Tagliavini	Project co-funded by EURAC Research

of Bolzano, as well as Prof. G. Wohlfahrt at the University of Innsbruck. This collaboration complements Eurac Research competences with a solid background on plant physiology and agrometeorology, which is crucial for the validation and interpretation of biophysical variables derived from EO data against in situ measurements, as well as for effective use of EO-derived biophysical variables for estimating carbon fluxes from different biomes in South Tyrol. **Required knowledge:** the ideal PhD candidate should demonstrate: i) a solid understanding of the primary remote sensing techniques currently used for vegetation monitoring, ii) experience in handling geospatial data and pre-processing remote sensing data, particularly from optical sensors, iii) proficiency in at least one programming language (R or Python) and familiarity with GDAL, iv) a good knowledge of the main biomes characterizing the Province of Bolzano, v) expertise in techniques for measuring in situ vegetation biophysical variables, and vi) excellent written and oral English skills.		
8. Assessing the potential of traditional agroforestry systems to contribute to agricultural transformation in the context of climate change **Description.** The PhD project aims to improve the understanding of the multiple ecological and socio-economic benefits and values of traditional agroforestry systems (TAS) and their potential to contribute to successful agricultural transformation, particularly in the context of climate change and the current biodiversity loss. Specifically, the project will be developed around two main objectives: The first objective is to better understand the potential of TAS as good practice examples for biodiversity conservation in agriculturally dominated landscapes. This will include the identification of key ecological and biological indicators, and the in-field monitoring of different functional groups (i.e. plants, insects/pollinators and birds) that are widely used in agro-ecological research as key proxies for ecosystem functions and services. The second objective is to generate quantitative and qualitative evidence on the role and potential of TAS as Nature-based Solutions (NbS) towards successful agricultural transformation. This will include the assessment and mapping of several material and non-material ecosystem services (ES), and the initiation of a stakeholder engagement process finalized at a comprehensive understanding of the enabling and hindering factors that can stabilize or trigger shifts in farming practices. The regional focus of the project will be set on South Tyrol (Northern Italy), with traditional orchard meadows (GER. Streuobstwiesen) as the case study agroforestry system.	Dr. L. Egarter Vigl and Prof. D. Zanotelli	Project funded by EURAC Research

Keywords: climate change, biodiversity loss, transformation, adaptation, ecosystem services, stakeholder engagement. **Required knowledge**: the ideal PhD candidate should demonstrate: i) proven experience in biological monitoring and stakeholder engagement processes; ii) familiarity with the concepts of Agroforestry, Nature-based Solutions (NbS) and Ecosystem Services (ES); iii) solid knowledge of spatial analyses and Ecosystem Services modelling; iv) good knowledge of the main biomes and landscapes characterizing the Province of Bolzano; v) very good interpersonal and collaborative/organizational skills to integrate into an international working group, vi) excellent communication skills in Italian and English, German is an advantage. The PhD project will be broadly embedded in an international setting as part of the EU Biodiversa+ project TRANSFOrm (Traditional agroforestry systems as Nature-based Solutions (NbS) to face multiple societal challenges), where Eurac Research is a partner in a consortium consisting of seven partner institutions and six case studies across Europe (IT, ES, PT, AT, IL, LT). On a more practical level, the project will be implemented in close collaboration with the Landscape Ecology and Biodiversity research groups of Eurac Research's Institute for Alpine Environment (L. Egarter Vigl & M. Anderle), which focuses on monitoring and modelling the spatio-temporal dynamics of biodiversity, ecosystem services and land use change in mountain regions, mainly using both quantitative and qualitative research approaches. The PhD will benefit from the collaboration between Eurac Research and the research groups of Prof. Zanotelli at the University of Bolzano and Prof. M. Dainese at the University of Verona. This collaboration complements Eurac Research's competences with a solid background in plant physiology and sustainable agro-ecological practices, which is crucial for identifying the values and benefits of biodiversity and ecosystem services, as well as for engaging with a wide range of local and national stakeholders.		
9. Factors influencing the outbreak of the Woolly apple aphid **Description**: The woolly apple aphid (Eriosoma lanigerum) is a significant pest on apple. These aphids feed on the plant's phloem and are significantly weakening infested trees. The infestation by the woolly apple aphid and the limited control strategies poses major challenges in apple production. Significant differences in woolly apple aphid infestation densities within and between orchards suggest that numerous unknown factors are influencing the spread and infestation density of this insect.	Prof. H. Schuler	Project funded by Alpoma

This project aims to identify factors that play a role in the infection dynamics of the woolly apple aphid through systematic surveys in practical orchards. We will conduct a comprehensive multifactorial analysis to understand factors which are influencing the outbreak of the woolly apple aphid. This project will be conducted in collaboration with the Research Centre Laimburg and the Südtiroler Beratungsring für Obst- und Weinbau as well as by marketing organizations, which also ensure financing and provision of farm-related information. **Keywords**: pest insects, wooly apple aphid, plant health, multifactorial analysis. **Required knowledge**: The candidate should be capable of performing complex data analyses and should have statistical skills to analyze and interpret comprehensive results, should have in-depth knowledge in soil science, plant physiology, and biotic and abiotic factors influencing plant health, should be willing to work intensively on-site in apple orchards and conduct laboratory analyses. The candidate should be able to clearly and precisely communicate research findings and should be able to collaborate in an interdisciplinary team.		
Curriculum 2: Ecology, environment and protection of mountain areas		
Title	**Supervisor(s)**	**Notes**
10. Enhancing Forest Productivity and Resilience: Exploring Tree Water Sources and Limitations at Renon Supersite **Description.** Forests play a crucial role in the terrestrial water cycle, regulating exchanges of water between the land surface and the atmosphere. However, as environmental disturbances become more frequent, forest hydrological cycles may shift. Alterations in canopy cover influence the water inputs to soils, affecting ecosystem function. Vapor pressure deficit and soil water availability are two key interacting factors that constrain transpiration and vegetation productivity. However, the relative importance of these factors in driving water and carbon flux responses to forest disturbances remains unclear. Stable water isotopes serve as tracers of hydrologic processes and can provide insights into ecosystem-atmosphere water exchange. This study investigates the water sources at the Renon Supersite to disentangle the effects of atmospheric and soil water deficits on tree and canopy functioning. By integrating productivity estimates from sap flow measurements, ^{13}C-derived water-use efficiency, and meteorological data with eddy covariance fluxes, this research aims to improve our understanding of plant functional traits and their role in forest ecosystem processes.	Prof. R. Tognetti and Prof. L. Montagnani	

Key words: Climate change, Forest productivity, Stable isotopes, Canopy interception, Tree transpiration. **Required knowledge:** The PhD student will conduct research on the interactions between ecophysiological processes and environmental drivers in mountain environments, adopting interdisciplinary methodologies. Candidates should have advanced understandings of forest ecophysiology, forest hydrology, and forest productivity. Preferred qualifications include the ability to work in an interdisciplinary team and experience with eco-physiological instrumentation and proficiency in Python, R, or MATLAB for data processing and statistical analysis. Experience with stable isotope analyses is also advantageous.		
11. Informing Post-Disturbance Forest Management: Examining Decomposition Dynamics and Their Effects on Forest Regeneration **Description.** Recent increases in forest tree mortality are expected to enhance deadwood abundance, potentially leading to elevated atmospheric CO_2 levels. Litter decomposition plays a crucial role in nutrient cycling and storage within forest ecosystems. However, the mechanisms driving decomposition processes in mountain forests—particularly in human-modified landscapes—remain poorly understood. This research quantifies decomposition dynamics and their relationships with environmental conditions across varying forest structures and management practices, utilizing chronosequences and long-term experimental plots. This study investigates decomposition alongside vegetation dynamics and soil physicochemical and biochemical properties. As forest canopy structure develops following disturbance, it may influence ecosystem functions by altering abiotic conditions. However, additional abiotic factors independent of canopy structure may also regulate decomposition. This study aims to elucidate how forest structure and environmental variables shape decomposition processes through their effects on soil biogeochemistry. **Key words**: Deadwood degradation, Forest regeneration, Litter decomposition, Stand structure, Soil biogeochemistry. **Required knowledge**: The PhD student will conduct research on the interactions between biogeochemical processes and environmental drivers in forest ecosystems, adopting interdisciplinary methodologies. Candidates should have advanced understandings of disturbance ecology, soil biogeochemistry, and stand mensuration. Preferred qualifications include the ability to work in an interdisciplinary team and experience with laboratory analysis, as well as proficiency in Python, R, or MATLAB for	Prof. R. Tognetti and Prof. L. Montagnani	

data processing and statistical analysis. Experience with LiDAR measurements is also advantageous.		
12. Identifying tipping point in climate change and consequences on alpine hazards **Description.** The Alps are undergoing accelerated climate change, characterized by rising temperatures and an increasing frequency of extreme precipitation events. These changes push the region closer to critical tipping points, where self-reinforcing feedback loops could make risk management exceedingly difficult. Understanding and analyzing the processes driving these dynamics are crucial for developing timely interventions to mitigate negative trends. This project leverages climate and hydrological monitoring data from South Tyrol to create conceptual models for Alpine river basin management. By identifying key tipping points, these models will inform proactive strategies to prevent their crossing. Ultimately, the models will provide alternative management approaches to enhance climate resilience and mitigate hazards and risks in Alpine river basins. **Key words:** Climate change and resilience, Tipping points, Alpine watersheds, Hydrogeological processes, Natural hazard and risk mitigation **Required knowledge:** The PhD student will conduct research on the interactions between climate forcing and geomorphological processes in mountain environments, adopting various interdisciplinary methodologies. Candidates should have advanced understandings of climate change processes, precipitation patterns, and river basin dynamics in mountain environments. Ability to work in Interdisciplinary team and experience with Python, R, or MATLAB for large data set processing, statistical analysis, simulation, and model development are preferential.	Dr. M. Zebisch and Dr. A. Andreoli	Project co-funded by Eurac Research
13. The challenge of sustainable forest rejuvenation under ungulates browsing in mountain landscapes **Description.** Combining existing data on population densities of ungulates, land-cover types, vegetation and climate with field work, the PhD student will study the interactions of browsing and forest rejuvenation in mountain landscapes of the Southeastern Alps. The analysis of ongoing dynamics touches traditional land-use practices and their modern development in one of the most emblematic mountain regions worldwide. Results of the study will contribute to closing research gaps of ecological	Prof. C. Wellstein/R. Tognetti/L. Montagnani/T. Zanon.	

sustainability and be integrated into management strategies and forest practices. **Keywords:** Sustainability, browsing, forest rejuvenation, landscape ecology. **Required knowledge:** candidates should possess a basic knowledge in plant, ecosystem and landscape ecology. Quantitative skills (statistics in R, (Q)GIS), experience in forest or animal ecology and willingness to do field work in a high mountain environment are beneficial.		

Short Description of the research groups

Curriculum 1 Sustainable agricultural production systems

Soil ecology (Prof. T. Mimmo, Prof. L. Borruso)

The research group is primarily focused on studying soil ecology and how biotic and abiotic factors affect the biogeochemical cycles of nutrients in the soil and rhizosphere. They use a multidisciplinary approach that analyses the chemical, biochemical, and physiological mechanisms involved in plant nutrient acquisition, translocation, and allocation. The group also examines the interactions between plant roots, soil, and microorganisms (such as bacteria and fungi), particularly in relation to biotic and abiotic stress. Further, the research group explores the role of taxonomic and functional biodiversity in soil health.

Plant genetics (Dr. S.J. Unterholzner, Prof. T. Mimmo)

The research group studies genetic mechanisms of plants adaptation towards abiotic stress. They use a multidisciplinary approach to analyze genetic, molecular, and physiological details involved in agricultural traits related to root development. Their main interest is to understand developmental programms controlling root developmental plasticity and their role in nutrient uptake as well as in abiotic stress adaptation. The group combines genetics techniques (genome editing, tissue specific and inducible genome editing and gene expression) with transcription factors analysis and molecular imaging and employ primarily the model plant Arabidopsis thaliana, but are setting up translational approaches to test their working hypothesis also in crop plants such as barley, tomato and apple. .

Insect chemical ecology and apiculture (Prof. S. Angeli)

The research group investigates the evolutionary biology of chemically mediated insect-plant interactions in agricultural ecosystems, with the goal to develop environmentally friendly pest control strategies through a chemical ecology approach. We study how host plants respond to insect attacks by releasing volatile compounds and the ecological functions they mediate. Using GC-MS, GC-EAD, PTR-MS, and behavioral assays such as olfactometry, arena tests, and field trials, we have achieved significant breakthroughs. These include the "Female Removal (FR)" technique for *Cydia pomonella*, based on kairomonal lures, and an attractive lure for *Drosophila suzukii* using yeast volatiles, with ongoing efforts to optimize these strategies for field applications. Beyond insect-plant interactions, our research extends to apiculture, where we study impact of insecticides on honey bees and pesticide monitoring to improve agricultural sustainability. By integrating chemical ecology with applied research, we develop innovative and scalable solutions for sustainable pest management.

Applied molecular entomology (Prof. H. Schuler)

Our research group is broadly interested in the evolutionary ecology of insect pest species. We are using a combination of genomic and population genomic approaches as well as in vivo experiments in laboratory and semi-field experiments. One of our primary research questions addresses the association of microbes with insects and their impact on the ecology and evolution of their hosts. In particular we study insect vectors of phytoplasma diseases, we investigate the associations of bark

beetles with symbiotic bacteria and fungi to understand their role in the population dynamics of this important pest species. Moreover, we study the invasion dynamics of invasive insect species. Our research combines fundamental and applied aspects of the biology of insect pest species with the orientation towards a more sustainable pest management.

Fruit tree physiology and ecosystems (Prof. M. Tagliavini, Prof. C. Andreotti, Prof. D. Zanotelli, Dr. D. Asensio)

The research focuses on eco-physiological processes that affect the use efficiency of resources and allow for the development of more sustainable production systems in orchards vineyards and berry crops. We study the exchange of CO_2, mineral nutrients, water and energy between soil, plants and atmosphere. Part of the activity investigates adaptation measures that can be adopted to cope with multiples summer stressors, like extreme summer heat, drought and high solar radiation (in cooperation with Prof. G. Wohlfahrt (University of Innsbruck), with Dr. G. Niedrist (Eurac Research) and with Dr. M. Thalheimer (Laimburg Res. Center) as well as agroecological management techniques that the sustainability of management practices. Research approaches include eco-physiological, micrometeorological, isotopic, biochemical, biometric methods, as well as modeling and the application of spectral analysis. The final aim is the enhancement of the use efficiency of resources in crop production systems, the development of sustainable management techniques that enhance the quality of the produces.

Agrofood economics, management and marketing (Prof. C. Fischer, Dr. M. Calvia)

The research activity in this area aims at improving the competitiveness of farms and agribusiness enterprises and the agrofood sector as a whole in South Tyrol and elsewhere. Current approaches and topics include: food supply and value chain economics and management; agribusiness economics and management; market analysis and marketing research; food marketing; agritourism; regional, agricultural and rural development (in cooperation with Dr. T. Streifeneder, Eurac); agricultural cooperatives, alternative agro-food networks, consumer studies, sustainable consumption, statistical data evaluation and econometrics (cross-section, time series and pooled datasets).

Grassland farming (Dr. G. Peratoner, Dr. T. Zanon)

The research focuses on productive and environmental aspect of forage systems (addressing both meadows and pastures), depending on the management intensity and on the site conditions and meteorology. Research approaches include the analysis of vegetation dynamics, forage yield, forage production and nutrient fluxes by means of biometric methods and statistical modelling, with possible applications at the interface with remote sensing. The final aim is providing scientifically sound information and innovation for a sustainable agronomic management of grassland resources under the climatic and topographic challenges of the mountain agriculture.

Technologies for agroforestry innovations (Prof. F. Mazzetto, Dr. G. Carabin)

The topics involve the application of digital technologies for the management of agricultural and forestry processes in mountainous environments. The aims are: a) to improve the quality of farm management as a whole; b) to optimize the use of machines and process equipment, with the aim of mitigating environmental impacts (i.e.: reduction of drift phenomena during phytosanitary treatments, containment of energy consumption and related carbon footprints, optimization of the water footprint); c) enable the development of alternative niche crops to traditional mountain farming practices, creating alternative sources of income through new models of agriculture designed for extreme environments; d) improve ergonomic and safety conditions for farm operators. Research approaches include both laboratory activities, where the functionality of the machines can be tested in controlled environments and with particularly sophisticated measurement systems, and field activities, to evaluate the functionality of possible prototypes in their real working contexts. Investigation methodologies will include both the use of various types of sensors (including ground sensing and LiDAR), including new generation sensors, and modeling approaches for physical,

environmental and management processes.

Curriculum 2 Ecology, Environment and Protection of Mountain Areas

Interdisciplinary landscape, vegetation and conservation ecology (Prof. C. Wellstein, Dr. F. J. White, Prof. N. Hölzel)

The working group addresses regional to global environmental issues, such as biodiversity research, functional diversity, climate change research, nature conservation, ecosystem restoration and sustainable and resource-efficient land use. We apply a large set of methods tailored for the scale of interest ranging from biogeography to molecular ecology and study various ecosystems, habitats and land-use types. We pursue studies on a global scale and focus on Europe, South America and South Africa. Our research covers Mediterranean, temperate and alpine regions. We combine research on ecological patterns and processes, management and conservation, under natural environmental variation and human impact.

Forest ecology (Prof. R. Tognetti, Prof. L. Montagnani, Prof. E. Tomelleri)

Our research group focuses on understanding montane forest ecology and how these ecosystems respond to both natural and human-induced changes, particularly in relation to climate change. We place special emphasis on biogeochemical cycles and aim to integrate our findings into management strategies that preserve and enhance forest functionality and resilience. Our studies range from examining the ecophysiology of individual trees using advanced technologies like IoT and proximal sensing, to exploring biodiversity and resilience at stand and watershed levels with methods such as eddy covariance, lidar, and UAVs. We also scale up to regional and national levels, employing remote sensing techniques and climate-smart forestry approaches.

River processes and natural hazards mitigation (Dr. A. Andreoli, Prof. L. Mao)

The group investigates the complex dynamics of mountain basins through their hydrological and sediment transport processes and by analyzing their morphological evolution, with a special focus on glacierized environments and on debris flow catchments. The activities are mostly related to field monitoring, GIS modelling and laboratory analysis, and tracers for both water runoff (EC, isotopes) and bedload transport (passive integrated transponders, PITs) are utilized. Ecohydrological issues relative to natural and anthropic-related vegetation are also investigated.

Center for Climate Change and Transformation (Eurac Research: Dr. M. Zebisch, Dr. M. Pittore, Dr. A. Dunant, Dr. A. Crespi)

At Eurac's Centre for Climate Change and Transformation (CCT) scientists from several Eurac Research Institutes and Centers are working together in an inter- and trans-disciplinary way to study how climate change impacts Earth's ecological and social systems and to better understand the cause-effect relationships which lead to key risks. For this PhD program two Research Lines are of relevance: Climate and Weather: better understanding weather and climate variability and climate change, including extremes, and providing accurate and timely climate analyses and projections to support hazard and risk modelling with respect to current and future trends. Natural Hazards: investigating, quantifying, and predicting the dynamics of natural hazards in space and time, with a specific focus on data-driven, multi-scale approaches and their relation to climate change. Furthermore, we develop robust, transdisciplinary methodologies for conceptualize and assess of multi-risk conditions and analyze risk governance processes focusing on the interface between research, policy and praxis.

5. Nella domanda di ammissione deve essere esplicitata la preferenza relativa al curriculum e per massimo 2 progetti di ricerca. La preferenza espressa sarà indicativa degli interessi della candidata o del candidato e non vincolante per la

5. In der Bewerbung muss die Präferenz für das Curriculum und für maximal 2 Forschungsprojekte angegeben werden. Die angegebene Präferenz ist ein Hinweis auf die Interessen der Bewerberin/des Bewerbers und

Commissione di ammissione.

6. Per le posizioni con borsa di studio a tematica vincolata verranno stilate graduatorie di merito separate. Per ciascun Curriculum verrà stilata una graduatoria di merito separata. I posti coperti da borsa di studio a tematica vincolata obbligano i vincitori e/o le vincitrici allo svolgimento dell'attività di ricerca pertinente al tema indicato. Questi verranno assegnati in via preferenziale alle candidate e ai candidati che ne facciano apposita richiesta nella domanda di ammissione.

7. Ai sensi della parte generale del presente bando i posti potranno essere aumentati a seguito di finanziamenti, erogati da altre università, enti pubblici di ricerca o da qualificate strutture produttive private. Di tale aumento sarà data comunicazione esclusivamente alla pagina web di unibz dedicata ai dottorati di ricerca. Le candidate ed i candidati che intendessero ottenere l'idoneità per le eventuali borse aggiuntive a tematica vincolata possono farne esplicita richiesta alla Commissione di ammissione in sede di colloquio al fine di permettere alla stessa di valutare la specifica idoneità.

Articolo 2 –
REQUISITI DI AMMISSIONE

1. Possono presentare domanda di ammissione ai sensi dell'art. 4 della parte generale del presente bando al dottorato di ricerca in Mountain Environment and Agriculture senza limiti di genere, di età e di cittadinanza:

a) coloro che sono in possesso di laurea specialistica (DM n. 509/1999), laurea magistrale (DM n. 270/2004), laurea del previgente ordinamento nelle seguenti classi di laurea: tutte

b) coloro che sono in possesso di analogo titolo accademico conseguito all'estero

c) coloro che conseguono il titolo di studio richiesto dal bando entro la data di

für den Zulassungsausschuss nicht bindend.

6. Für an themenspezifische Stipendien gebundene Positionen werden gesonderte leistungsbezogene Rangordnungen verfasst. Für jedes Curriculum wird eine gesonderte leistungsbezogene Rangordnung verfasst. Die Gewinnerinnen oder Gewinner von an themenspezifische Stipendien gebundenen Positionen sind zur Durchführung von Forschungstätigkeiten im Zusammenhang mit dem angegebenen Thema verpflichtet. Eben genannte Positionen werden vorrangig den Kandidatinnen und Kandidaten zugewiesen, die in ihrer Bewerbung einen entsprechenden Antrag stellen.

7. Gemäß den Bestimmungen des allgemeinen Teils der vorliegenden Ausschreibung kann die Anzahl der Positionen durch die Finanzierung anderer Universitäten, öffentlicher Forschungseinrichtungen oder qualifizierter privater Unternehmen erhöht werden. Eventuelle Informationen zur Erhöhung der Positionen werden ausschließlich auf der unibz-Webseite für die Doktoratsstudien veröffentlicht. Kandidatinnen und Kandidaten, die an den zusätzlichen themenspezifischen Stipendien interessiert sind, müssen beim Gespräch einen entsprechenden ausdrücklichen Antrag an die Auswahlkommission richten, sodass diese ihre Eignung feststellen kann.

Artikel 2 –
ZULASSUNGSVORAUSSETZUNGEN

1. Die Bewerbung gemäß Art. 4 des allgemeinen Teils der vorliegenden Ausschreibung zum Doktoratsstudium in Mountain Environment and Agriculture kann von all jene eingereicht werden, die ungeachtet von Geschlecht, Alter und Staatsangehörigkeit:

a) im Besitz eines Masters im Sinne des Ministerialdekrets Nr. 509/1999 oder des Ministerialdekrets Nr. 270/2004, eines Laureatsdiploms der vorhergehenden Studienordnung in folgenden Klassen sind: alle

b) im Besitz eines gleichwertigen, im Ausland erworbenen, Titels sind;

c) den oben angeführten Titel bis spätestens zum Zeitpunkt der Immatrikulation

immatricolazione al corso di dottorato. In tal caso saranno ammessi con riserva alla selezione e saranno tenuti a presentare il titolo di studio entro la scadenza prevista per l'immatricolazione, a pena di decadenza dall'ammissione al corso.

erwerben. In diesem Fall werden die Kandidatinnen und Kandidaten mit Vorbehalt zum Auswahlverfahren zugelassen und haben den Studientitel, bei sonstigem Ausschluss, spätestens innerhalb der Immatrikulationsfrist nachzureichen.

I candidati/le candidate devono possedere un adeguato background educativo, e/o culturale e/o professionale nel campo delle scienze agrarie, ambientali, biologiche, della terra.

Von den Bewerbern/Bewerberinnen wird es erwartet, dass sie einen angemessenen Bildungs- und/oder kulturellen und/oder beruflichen Hintergrund im Bereich der Agrar-, Umwelt-, Erdwissenschaften, oder Biologie erworben haben.

2. Requisiti linguistici: è richiesta una buona/ottima conoscenza della lingua inglese, la quale verrà valutata in sede di colloquio.

2. Sprachliche Voraussetzungen: gefragt sind gute/ausgezeichnete Englischkenntnisse, welche im Auswahlgespräch überprüft werden.

Articolo 3– DOMANDA DI AMMISSIONE

Artikel 3 – BEWERBUNG

1. Oltre alla documentazione indicata dalla parte generale del presente bando, deve essere caricata nel portale di preiscrizione la seguente documentazione:

1. Neben den vom allgemeinen Teil der vorliegenden Ausschreibung genannten Unterlagen, müssen folgende Dokumente auf das Bewerbungsportal hochgeladen werden:

a) Lettera motivazionale in lingua inglese (massimo 1 pagina), nella quale va indicata la preferenza relativa ai progetti di ricerca (massimo 2) e/o alla posizione con borsa a tematica vincolata, motivando brevemente la propria scelta;

a) Ein Motivationsschreiben in englischer Sprache (max. 1 Seite), in welchem die Präferenz für die vorgeschlagenen Forschungsprojekte (maximal 2) bzw. für den an ein themenspezifisches Stipendium gebundenen Position, samt Begründung der Wahl, angegeben ist;

b) Curriculum vitae aggiornato redatto in inglese secondo il formato europeo, scaricabile al seguente link: https://europass.cedefop.europa.eu/en/documents/curriculum-vitae;

b) ein aktualisierter Lebenslauf in englischer Sprache und im EU-Format – auf folgendem Link herunterladbar: https://europass.cedefop.europa.eu/en/documents/curriculum-vitae;

c) fino ad un massimo di 2 lettere di referenza, scritte in italiano, tedesco o inglese da parte di una o un docente universitaria/o o una ricercatrice o un ricercatore di un istituto di ricerca;

c) Bis zu maximal 2 Referenzschreiben in italienischer, deutscher oder englischer Sprache von einer Universitätsdozentin/ einem Universitätsdozenten oder einer Wissenschaftlerin/ einem Wissenschaftler eines Forschungsinstituts.

d) copia delle pubblicazioni (pubblicate o accettate) inclusa la tesi di laurea magistrale in PDF;

d) Eine Kopie der Veröffentlichungen (veröffentlicht oder angenommen) einschließlich der Masterarbeit in PDF;

In aggiunta alla documentazione di cui ai punti a-d, se disponibile, caricare:

Zusätzlich zur Dokumentation unter a-d, falls vorhanden, bitte hochladen:

e) eventuali certificazioni di conoscenza della lingua inglese di livello B2 o superiore (vedi lista

e) eventuelle Bescheinigungen über die Beherrschung der englischen Sprache auf B2-

certificazioni riconosciute dal Centro linguistico: https://www.unibz.it/it/services/language-centre/study-in-three-languages/). Nota bene: il certificato deve essere stato rilasciato non più di 5 anni prima della candidatura.

Niveau oder höher (siehe Liste der anerkannten Bescheinigungen des Sprachzentrums: https://www.unibz.it/it/services/language-centre/study-in-three-languages/). Merke: bei der Kandidatur darf die Bescheinigung nicht älter als 5 Jahre sein.

Articolo 4 – MODALITÀ DI SELEZIONE

1. Il procedimento di selezione si articola in tre fasi:

a) le domande vengono esaminate d'ufficio in ordine alla completezza e al soddisfacimento dei requisiti formali; delle candidate e candidati esclusi per incompletezza della domanda o per mancanza di requisiti verrà data comunicazione sulla pagina web dedicata di unibz. La pubblicazione avrà natura di notifica a tutti gli effetti. Non saranno effettuate comunicazioni individuali.

b) La Commissione di ammissione valuterà ai sensi del successivo art. 5 le domande complete, avendo riguardo ai titoli e alla documentazione allegata di cui all'art. 3. Le candidate e i candidati che raggiungeranno il punteggio minimo di cui all'art. 5 verranno ammessi al colloquio. Dell'ammissione al colloquio nonché delle relative date e orari verrà data comunicazione sulla pagina web dedicata di unibz. Saranno inviate in tempo utile all'indirizzo e-mail indicato nella domanda di ammissione comunicazioni individuali alle sole candidate e ai soli candidati ammessi al colloquio.

c) I colloqui potranno essere sostenuti in presenza o in videoconferenza, previa richiesta della candidata o del candidato alla Commissione di ammissione, e verranno valutati ai sensi dei criteri stabiliti nel successivo articolo 5. Le candidate e i candidati dovranno garantire l'uso di una webcam per consentire la propria identificazione alla Commissione di ammissione esibendo un valido documento d'identità o passaporto, pena l'esclusione dalla procedura selettiva.

2. La mancata presentazione alle prove e/o ai colloqui, il mancato collegamento, l'irreperibilità

Artikel 4 – AUSWAHLVERFAHREN

1. Das Auswahlverfahren ist in drei Phasen strukturiert:

a) Die Bewerbungen werden von Amts wegen auf Vollständigkeit und auf die Erfüllung der formellen Voraussetzungen geprüft; Kandidatinnen und Kandidaten, die aufgrund unvollständiger Bewerbungen oder Nichterfüllung der Voraussetzungen ausgeschlossen werden, werden auf der entsprechenden unibz-Webseite benachrichtigt. Die Veröffentlichung gilt für alle Zwecke als offizielle Mitteilung. Es werden keine individuellen Mitteilungen gesendet.

b) Die Auswahlkommission nimmt eine Bewertung der vollständigen Bewerbungen gemäß Artikel 5 vor und berücksichtigt dabei die in Artikel 3 genannten Qualifikationen und beigefügten Unterlagen. Kandidatinnen und Kandidaten, welche die in Artikel 5 genannte Mindestpunktzahl erreichen, werden zum Gespräch zugelassen. Die Zulassung zum Gespräch samt entsprechenden Datum und Uhrzeit werden auf der entsprechenden unibz-Webseite veröffentlicht. Nur den zum Gespräch zugelassenen Kandidatinnen und Kandidaten werden rechtzeitig individuelle Mitteilungen an die in der Bewerbung angegebene E-Mail-Adresse übermittelt.

c) Die Gespräche können persönlich oder per Videokonferenz stattfinden, sofern die Kandidatin oder der Kandidat dies bei der Auswahlkommission beantragt, und werden nach den in Artikel 5 genannten Kriterien bewertet. Die Kandidatinnen und Kandidaten müssen den Einsatz einer Webcam garantieren, um der Auswahlkommission ihre Identifizierung mittels eines gültigen Personalausweises oder Reisepasses zu ermöglichen, andernfalls werden sie vom Auswahlverfahren ausgeschlossen.

2. Das Nichterscheinen zu den Prüfungen und/oder Gesprächen, die mangelnde

della candidata o del candidato nel giorno e/o nell'orario stabilito o la mancata esibizione di un valido documento d'identità o passaporto sono motivo di esclusione dalla procedura selettiva.

Verbindung, die Nichtverfügbarkeit der Kandidatin oder des Kandidaten am vorgesehenen Tag und/oder zur vorgesehenen Uhrzeit oder die Nichtvorlage eines gültigen Personalausweises oder Reisepasses sind Gründe für den Ausschluss vom Auswahlverfahren.

3. Qualora si verificassero problemi tecnici durante lo svolgimento dei colloqui in videoconferenza, se il problema riguarda uno o più componenti della Commissione di ammissione, il colloquio è rinviato d'ufficio ad altra data; se il problema riguarda la candidata o il candidato, la Commissione può motivatamente rinviare la prova ad altra data, nel rispetto dei principi di non discriminazione e di parità di trattamento tra candidate e candidati.

3. Treten während der Durchführung der Gespräche per Videokonferenz technische Probleme auf, so wird die Prüfung von Amts wegen auf einen anderen Termin verschoben, wenn das Problem eine oder mehrere Mitglieder der Auswahlkommission betrifft; betrifft das Problem die Kandidatin oder den Kandidaten, kann die Auswahlkommission im Einklang mit den Grundsätzen der Nichtdiskriminierung und der Gleichbehandlung von Kandidatinnen und Kandidaten die Prüfung aus triftigen Gründen auf einen anderen Termin verschieben.

4. Espletate le prove di concorso, la Commissione di ammissione stila le graduatorie di merito sulla base dei punteggi ottenuti dalle candidate e dai candidati nelle singole prove.

4. Nach Abschluss der Wettbewerbsprüfungen erstellt die Auswahlkommissionen auf der Grundlage der von den Kandidatinnen und Kandidaten in den einzelnen Prüfungen erzielten Punktezahl die entsprechenden leistungsbezogenen Ranglisten.

Articolo 5 – CRITERI DI VALUTAZIONE

Artikel 5 – BEWERTUNGSKRITERIEN

1. La Commissione di ammissione procede ad una valutazione comparativa delle candidate e dei candidati. Per le candidate e i candidati che abbiano espresso la preferenza per le posizioni con borsa di studio a tematica vincolata, la Commissione accerta anche l'idoneità per lo specifico tema.

1. Die Auswahlkommission führt eine vergleichende Bewertung der Kandidatinnen und Kandidaten durch. Bei Kandidatinnen/Kandidaten, die eine Präferenz für mögliche an themenspezifische Stipendien gebundene Positionen geäußert haben, prüft die Auswahlkommission auch ihre Eignung für das spezifische Thema.

2. In fase di valutazione della documentazione depositata unitamente alla domanda di cui all'art. 3 verranno assegnati i seguenti punteggi:

2. Bei der Bewertung der mit der Bewerbung eingereichten Unterlagen gemäß Art. 3 werden folgende Punkte vergeben:

a) Fino a un massimo di 23 punti per la qualificazione accademica indicata del candidato/della candidata a svolgere con successo un corso di dottorato in Mountain Environment and Agriculture, come risulta dal CV, dal voto/grado del master, dalla lettera motivazionale e dagli altri documenti e certificazioni;

a) Bis zu maximal 23 Punkte für die angegebene akademische Qualifikation des Bewerbers/der Bewerberin für ein erfolgreiches Doktoratsstudium im Bereich Alpine Umwelt und Landwirtschaft, wie sie aus dem Lebenslauf, dem Masterabschluss/der Note, dem Motivationsschreiben und anderen Dokumenten und Bescheinigungen hervorgeht;

b) Fino a un massimo di 7 punti per la congruenza del curriculum con la tematica scelta dal

b) Bis zu 7 Punkte für die Übereinstimmung der akademischen Qualifikation mit dem vom

candidato/dalla candidata tra quelle indicate nella lista dei progetti disponibili nel portale dedicato;

3. Le candidate e i candidati che raggiungono la soglia di 18/30 punti saranno ammesse/ammessi al colloquio. Dell'ammissione al colloquio nonché delle relative date e orari verrà data comunicazione sulla pagina web dedicata di unibz. Saranno inviate in tempo utile all'indirizzo e-mail indicato nella domanda di ammissione comunicazioni individuali solo alle candidate e ai candidati ammessi al colloquio.

4. In sede di colloquio saranno valutati i seguenti elementi: l'attitudine alla ricerca; il possesso di un livello linguistico adeguato alla lingua del corso; la capacità argomentativa rispetto alle ipotesi teoriche e metodologiche del progetto di ricerca presentato. Dal momento che il programma di dottorato viene offerto in lingua inglese, i candidati/le candidate devono essere in possesso di un livello linguistico adeguato (corrispondente almeno al livello intermedio, B2), che verrà accertato durante il colloquio. Saranno attribuiti fino ad un massimo di 20 punti. Il colloquio si intende superato con l'ottenimento di almeno 12/20 punti.

5. Il punteggio finale è costituito dalla somma dei punteggi ottenuti in sede di valutazione della documentazione e del colloquio. Saranno idonee/idonei le candidate e i candidati che avranno conseguito almeno 30/50 punti. In caso di parità di punteggio, avrà la precedenza la candidata o il candidato anagraficamente più giovane.

Articolo 6 –GRADUATORIE DI MERITO

1. Le candidate ed i candidati saranno ammesse/i ai corsi secondo l'ordine di graduatoria fino al raggiungimento del numero dei posti messi a concorso. A parità di merito prevale la candidata o il candidato anagraficamente più giovane. In caso di utile collocamento in più graduatorie, la vincitrice o il vincitore dovrà esercitare l'opzione per una sola posizione. Per ciascuna posizione con borsa di studio a tematica vincolata saranno stilate graduatorie di merito separate.

Bewerber gewählten Thema, das in der Liste der verfügbaren Projekte auf dem entsprechenden Portal aufgeführt ist;

3. Kandidatinnen und Kandidaten, die den Schwellenwert von 18/30 Punkten erreichen, werden zum Gespräch zugelassen. Die Zulassung zum Gespräch samt entsprechenden Datum und Uhrzeit werden auf der entsprechenden unibz-Webseite veröffentlicht. Nur den zum Gespräch zugelassenen Kandidatinnen und Kandidaten werden rechtzeitig individuelle Mitteilungen an die in der Bewerbung angegebene E-Mail-Adresse übermittelt.

4. Während des Gesprächs werden folgende Elemente bewertet: Eignung zur Forschung; ein der Kurssprache angemessenes Sprachniveau; Argumentationsfähigkeit in Bezug auf die theoretischen und methodologischen Hypothesen des vorgestellten Forschungsprojekts. Da das Doktorat in englischer Sprache angeboten wird, müssen die Bewerber/Bewerberinnen über ein angemessenes Sprachniveau (mindestens Mittelstufe B2) verfügen, das im Vorstellungsgespräch festgestellt wird. Es werden maximal 20 Punkte vergeben. Das Gespräch gilt als bestanden, wenn mindestens 12/20 Punkte erreicht werden.

5. Die endgültige Punktzahl ergibt sich aus der Summe der Punkte, die bei der Bewertung der Unterlagen und beim Gespräch erzielt wurden. Kandidatinnen und Kandidaten, die mindestens 30/50 Punkte erreicht haben, sind geeignet. Bei Punktgleichheit hat die jüngere Kandidatin oder der jüngere Kandidat Vorrang.

Artikel 6 –LEISTUNGSBEZOGENE RANGORDNUNGEN

1. Die Zulassung der Kandidatinnen und Kandidaten zum Doktoratsstudium erfolgt gemäß der Rangliste bis zum Erreichen der ausgeschriebenen Positionen. Bei gleicher Leistung hat die jüngste Kandidatin oder der jüngste Kandidat den Vorrang. Im Falle einer erfolgreichen Reihung in mehreren Ranglisten muss die Gewinnerin oder der Gewinner die Option für ausschließlich eine Position ausüben. Für jede an einem themenspezifischen Stipendium gebundene Position wird eine

gesonderte leistungsbezogene Rangordnung erstellt.

2. Le graduatorie finali di merito saranno pubblicate sul sito web di unibz alla pagina dedicata ai dottorati di ricerca. **Tale pubblicazione ha valore di comunicazione ufficiale. Non saranno effettuate comunicazioni individuali.**

2. Die endgültigen, leistungsbezogenen Ranglisten werden auf den Webseiten der unibz veröffentlicht. **Diese Veröffentlichung gilt als offizielle Mitteilung. Es werden keine individuellen Mitteilungen versendet.**